

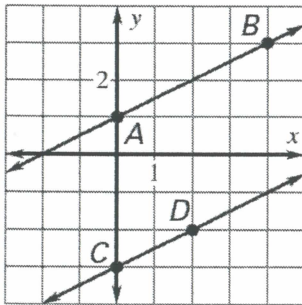
Name _____ Geometry Worksheet Slope

Find the slope between the two lines, then determine whether the lines are *parallel*, *perpendicular* or *neither*.

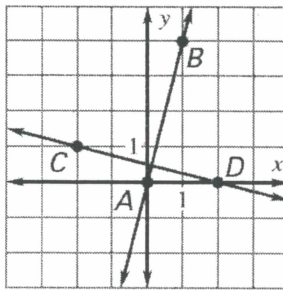
- 1) Line 1: (0,3) and (2, 4) $L1 - m = \frac{4-3}{2-0} = \frac{1}{2}$
 Line 2: (2, 1) and (8, 4) $L2 - m = \frac{4-1}{8-2} = \frac{3}{6} = \frac{1}{2}$ **PARALLEL**
- 2) Line 1: (-1, 3) and (0, 5) $L1 - m = \frac{5-3}{0-(-1)} = \frac{2}{1} = 2$
 Line 2: (2, 1) and (6, -1) $L2 - m = \frac{-1-1}{6-2} = \frac{-2}{4} = -\frac{1}{2}$ **PERPENDICULAR**
- 3) Line 1: (-1, 3) and (4, 4) $L1 - m = \frac{4-3}{4-(-1)} = \frac{1}{5}$
 Line 2: (3, 1) and (-2, 2) $L2 - m = \frac{2-1}{-2-3} = \frac{-1}{5}$ **NEITHER**
- 4) Line 1: (0, -3) and (-2, -7) $L1 - m = \frac{-7-(-3)}{-2-0} = \frac{-4}{-2} = 2$
 Line 2: (2, 1) and (0, 3) $L2 - m = \frac{3-1}{0-2} = \frac{2}{-2} = -1$ **NEITHER**
- 5) Line 1: (-2, 2) and (1, -3) $L1 - \begin{array}{r|l} -2 & 2 \\ - & (1|-3) \\ \hline -3 & 5 \\ \hline \end{array} = \frac{-5}{3}$
 Line 2: (-2, 1) and (3, 4) $L2 - \begin{array}{r|l} -2 & 1 \\ - & (3|4) \\ \hline -5 & -3 \\ \hline \end{array} = \frac{+3}{5}$ **PERPENDICULAR**
- 6) Line 1: (-2, 5) and (1, 4) $L1 - \begin{array}{r|l} -2 & 5 \\ - & (1|4) \\ \hline -3 & 1 \\ \hline \end{array} m = -\frac{1}{3}$
 Line 2: (4, 0) and (5, 3) $L2 - \begin{array}{r|l} 4 & 0 \\ - & (5|3) \\ \hline -1 & -3 \\ \hline \end{array} m = 3$ **PERPENDICULAR**

Find the slope of the two lines. Determine if the lines are parallel, perpendicular or neither.

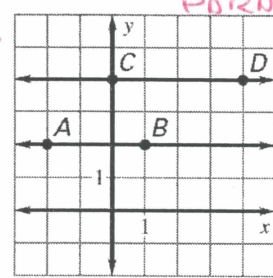
7) \overline{AB} $m = \frac{2}{4} = \frac{1}{2}$
 \overline{CD} $m = \frac{1}{2}$ PARALLEL



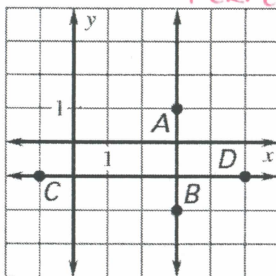
8) \overline{AB} $m = \frac{4}{1} = 4$
 \overline{CD} $m = -\frac{1}{4} = -\frac{1}{4}$ PERPEN. DICULAR



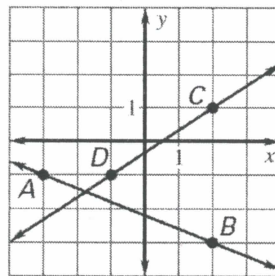
9) \overline{AB} $m = 0$
 \overline{CD} $m = 0$ PARALLEL



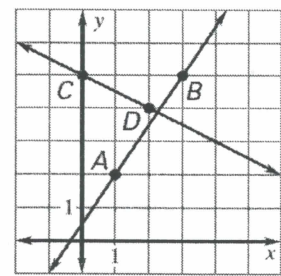
10) \overline{AB} $m = \text{UNDEFINED}$
 \overline{CD} $m = 0$ PERPENDICULAR



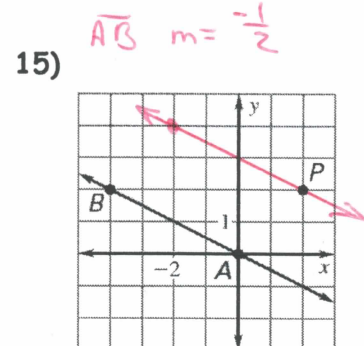
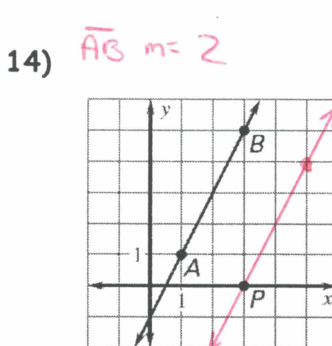
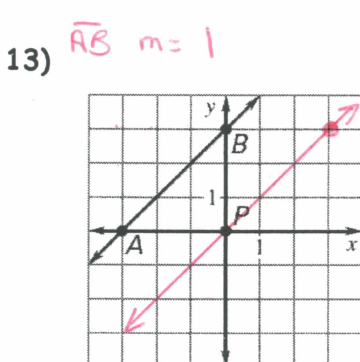
11) \overline{AB} $m = -\frac{2}{3}$
 \overline{CD} $m = \frac{2}{3}$ NEITHER



12) \overline{AB} $m = \frac{3}{2}$
 \overline{CD} $m = -\frac{1}{2}$ NEITHER



Graph a line that is parallel to \overline{AB} and passes through point P.



Graph a line that is perpendicular to \overline{AB} and passes through point P.

